Cummins Surveillance Panel Meeting Minutes

July 18, 2024 10:00-11:00 CST

Participants:

Afton – Joe Hoehn

Chevron Oronite – Marnix Torreman, Josephine Martinez

Cummins – Phil Shelton, Wei Qin

ExxonMobil – Steve Jetter

Infineum – Elisa Santos, David Brass, Andrew Smith

Intertek – Joshua Ward (Chairman)

Lubrizol – Austin Brininger, Jonathan Bolaney

New Market – Amanda Stone

SwRI – Joe Moore, Jose Starling

TEI – Dan Lanctot

TMC – Sean Moyer

Agenda:

- ISB New Reference Oil Timeline
- New Hardware Introduction for ISB and ISM
- Calterm Screen File Parameter List

ISB New Reference oil:

- Lab availability for matrix:
 - o IAR late August
 - LZ mid-August/early September
 - SwRI mid/early September
- The goal is for RO 835 will be the only reference oil going forward.
 - This will need to be motioned once the matrix is completed.

New Hardware Introduction:

• TEI has most of the parts for both engines.

- ISB camshafts (1000 ordered) will begin machining beginning of August, done by September.
 - Estimated 400 usable cams. Special thanks to Andrew and Phil for pushing for a larger batch size.
- ISM intake/exhaust valves should reach TEI in August, this is the last part needed for new kits.
- Goal is 200 kits for both tests.
- With the current kit levels at labs, introducing the ISB parts as a rolling change will bring in data quickly enough to evaluate results within a reasonable time frame.
- TEI is at 80 kits worth of ISM adjusting screws.
 - To prevent repeated batch changes TEI would like to toss them but would like the panels' input.
 - Phil Shelton will investigate kit cost increase and timeline details.

Motion: Apply level 2 Ei limits for the introduction of the next batch of ISB hardware, following the completion of the ISB new reference oil precision matrix. The new hardware must be introduced on a reference test using the new reference oil 835.

David Brass motions, Josephine Martinez seconds.

None opposed, Cummins waives. Motion passes.

- TEI has 12 kits left for the ISM. 8-9 tests planned for the matrix.
 - Matrix funding is set, if costs change the amount of testing funded may decrease.
- RO 835 supplier is being asked if they would be willing to run the ISM prove out test.
- New ISB blocks
 - LZ has run 2 references on a new block so far, both more severe than expected and has been unable to calibrate stand.
 - All labs will be referencing using a new block in the near future, some labs plan to use new blocks in the reference oil matrix.

Calterm Screen File Parameter List:

- Cummins needs to lock the ECM parameters due to an aftermarket hack causing out of EPA compliance engines.
 - Adding parameters later is possible.
- It is possible to download the parameter list from Calterm, Phil will send out instructions.

Next Steps:

• Labs to investigate reference tests on new blocks as they run for any odd behavior that could explain a change in severity.

<u>Next Meeting:</u> Quick meeting of lab engineers next Friday to cover the Calterm parameter list.